Hoffert Jean-Luc, Litwin, France, on behalf of Intergraph, presents a case study where new software has been implemented to streamline modelling workflows.

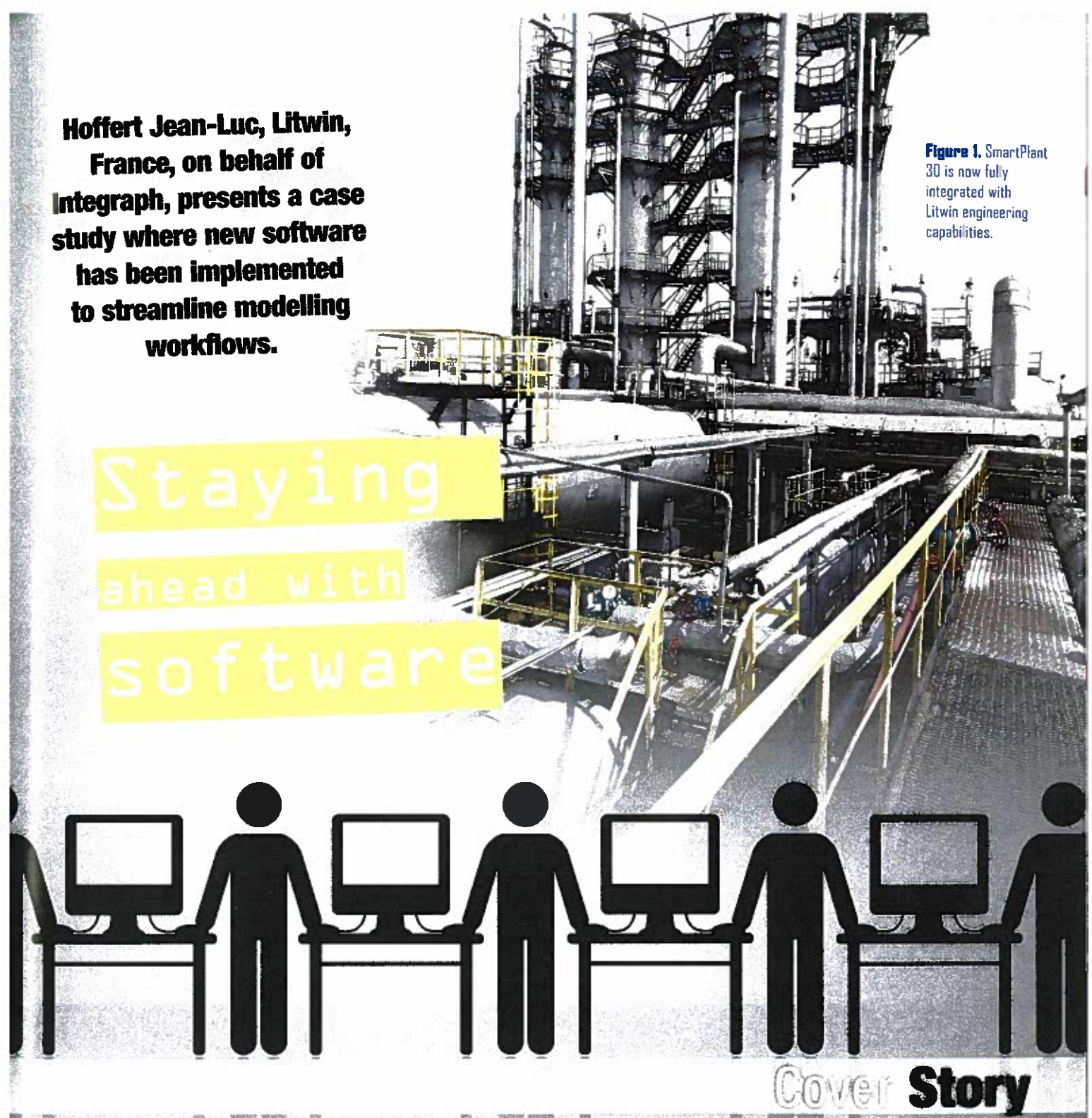

Figure 1. SmartPlant 3D is now fully integrated with Litwin engineering capabilities.

Staying ahead with software

Cover Story

Litwin, a French engineering company, was seeking to improve productivity, workflows and discipline integration by implementing new software. The company also wanted software that would help with environmental compliance requirements as well as support its vision of the future.

The first phase of an overall programme was completed using Intergraph PDS® software. Electronic files of the drawings were delivered in MicroStation J (V7) format.

Why Intergraph?

Litwin selected Intergraph SmartPlant® 3D (SP3D) software for the design of phase 2 of this overall programme for the following reasons:

- It offers the possibility to easily exchange the data generated during the design and to reuse it to increase data consistency throughout the different stages (design, procurement, construction).
- The environment is based on Microsoft interface, interactive and user friendly.

SmartPlant 3D is the integral design component within the SmartPlant Enterprise datacentric solutions that provides all of the capabilities needed for large scale project engineering design, and then keep it 'as built' throughout its life cycle.

Implementation

Litwin chose to implement SP3D on a live project without running a pilot project. For the implementation of the live project, SP3D was used in a concurrent engineering mode by the design team for the 3D modelling of the civil work, structural steel, equipment, piping and cable trays.

All area and piping drawings, isometrics and pipe support drawings were produced with SP3D. Civil and underground networks drawings have been issued with MicroStation v8 based on views from the 3D model placed in reference. Electronic files of the drawings were delivered in MicroStation V8 format.

Several years ago, Litwin implemented SmartPlant P&ID, software for creating intelligent piping and instrumentation diagrams (P&IDs). The test phase of the link between SmartPlant P&ID and SP3D is already planned at the completion of the project as a step towards an integrated engineering environment.

Training

Standard administrator and user training sessions have been organised at Intergraph offices as a result of Litwin deciding to launch the design with SP3D.

Litwin ordered services from Intergraph for the server installation and the creation, setup and customisation of the project. So far, there have been 13 assistance days (90% of project completion in design) including:

- Server installation.
- Project creation and customisation.
- Training for piping specifications.
- Training and isometric customisation.
- Customisation of ISOGEN.
- Drawing customisation.

The Litwin team was able to obtain an immediate autonomy after the training, concerning the modelling and the administration of the project.

The creation of the specifications and the installation of the catalogues, as well as the customisation, were carried out parallel to modelling. Less than six weeks after the project started, Litwin designers started work on the live project with SP3D.

Customisation

Along with manual piping class programming, the following customisations have been made:

- Special items (i.e. valves) including symbols.
- Drawing rules particularly for civil, piping and support drawings.
- Isometrics.
- Supports (specific for the project).

First results

One of the keys to the project's success is that users and administrators have shown high motivation and involvement in regards to SP3D. Furthermore, the user interface is modern and very interactive, with a common philosophy for all tasks. Also, the SmartStep commands are very helpful for the designers as they provide simple toolboxes and commands.

The future

SmartPlant 3D is now fully integrated with Litwin engineering capabilities. Litwin will continue to develop the SP3D module and aims to upgrade to the 2009 version.

Finally, Litwin will concentrate its efforts on all interfaces with the other SmartPlant Enterprise suite, P&ID and instrumentation solutions it uses to maximise efficiency and fulfill its requirements.